

**REMARKS**

Claims 1-19, as listed above, are presently pending in this application. Applicants provide the above amendments and the following remarks to place the application in condition for allowance.

**Rejections Under 35 U.S.C. 102(e)**

The Office Action rejects claims 1-4 and 18 as being anticipated by U.S. Patent No. 6,157,832 of Klein.

Claim 1, as amended, recites a method of operating a network device having an embedded first configuration database and an embedded second configuration database. The method includes the steps of providing a first configuration database *containing data for configuring the network device*, and operating the network device with the first configuration database as a primary configuration database. The method further calls for providing a second configuration database containing backup data corresponding to the data contained in the first configuration database, and operating the network device with the second configuration database as a backup configuration database. Modifications made to the first configuration database are replicated to the second configuration database. Upon detecting a configuration database upgrade operation, replication of data from the first configuration database to the second configuration database is stopped and the second configuration database is upgraded while the first configuration database continues to provide configuration data to the network device.

Support for the amendments to claim 1 can be found, for example, on page 5, beginning at line 1, and on page 67, beginning at line 16.

Klein discloses a method for updating a redundant transaction service system (such as an automatic call distributor that provides automatic routing of telephone calls) that can include a primary and a secondary transaction processing devices. Updating of the system is accomplished by removing the secondary device from on-line service and updating it, e.g., installing new software. This is followed by removing the primary transaction device from on-line service (at this point, *both* devices are *off-line*), and transferring a current database of the primary transaction device to the secondary device. In addition, the updated database of the

secondary device is converted to a format associated with the newly installed software. The secondary device is then returned on-line to provide transaction processing, and the new software is installed on the primary device. This is followed by a synchronization process by which the transactional data contained in the current database of the secondary device is transferred to that of the primary device while the secondary device remains on-line.

The Examiner finds Applicants' remarks, presented in the response to the previous Office Action, that Klein's databases do not contain configuration data unpersuasive because the "claim does not point out that the databases must contain data for operating a network device." In response, claim 1 now expressly recites that the first configuration database contains data for configuring a network device, and the second configuration database contains backup data corresponding to the data contained in the first configuration database. In other words, both databases contain configuration data for *configuring the network device*, and hence are distinct from transactional databases of Klein that contain *records of incoming transactions*, such as inquiries or calls. For example, the configuration databases recited in claim 1 can provide information regarding the availability of a particular port for data transmission (whether the port is enabled or disabled) (e.g., see specification, page 30, lines 3-27). In contrast, the transactional databases of Klein do not provide information to processes executing on the transactional processing devices regarding configurations of these devices.

Further, the primary purpose of Klein is not updating the transactional databases of the transaction service devices, but is rather installing new software on these devices. The synchronization of the transactional databases occurs as an step ancillary to the software installation. Moreover, in Klein, the synchronization of the secondary transaction database with the primary database is performed when both devices are off-line (step 215 in FIGURE 2B). Notwithstanding, the Examiner states that the operation of the Klein system as seen by a user is not disrupted during this synchronization step, even though both devices are off-line, due to the high speed of the synchronization. Without acquiescing to the Examiner's assertion, Applicants note that regardless of a user's perception of the operation of the Klein system, when both transaction databases are off-line, neither is capable of performing its expected function including storing records of incoming transactions. In contrast, amended claim 1 recites that upgrading of the second configuration database is performed while the first configuration

database continues to provide configuration data to the network device, that is, while the first configuration database continues to perform its expected function. Accordingly, applications executing on the network device continue to have access to configuration data even as the second configuration database is being upgraded. This continued accessibility of configuration data is particularly advantageous because it inhibits potential loss of data packets routed by the network device, which otherwise could occur.

Hence, amended claim 1 distinguishes patentably over Klein.

Claim 2 depends on claim 1, and further recites detecting commitment of configuration database upgrade (e.g., saving the upgraded configuration in persistent storage and removing the old configuration from memory as well as persistent storage), operating the network device with the first configuration database as a backup database, and replicating modifications made to the second configuration database to the first configuration database, *after detecting the commitment of the second configuration database upgrade*. As noted in the response to the previous office action, postponing replication of changes to the first configuration database until detection of the commitment of the upgrade modification, i.e., maintaining a copy of the old configuration until the new configuration is proven successful, advantageously allows returning to the old configuration if errors are detected in the upgrade.

In response to Applicants argument that Klein fails to teach postponing replication of changes made to one database to another until commitment of those changes is detected, the Examiner states that Klein shows in FIGURE 2A, step 210 “that before the changes are to be loaded onto the primary database, they are loaded onto the secondary database and that database is rebooted with the new software.” The Examiner concludes that “this successful reboot is the detection of changes.” Applicants respectfully disagree for the following reasons. In step 210 of Klein, new software is installed on the secondary transaction device and the device is rebooted. However, the transaction database of the secondary device remains “outdated” (i.e., not synchronized with the primary database). In other words, a successful reboot signals at most a successful installation of the new software, and not a successful change of the database. In fact, the synchronization of the secondary database with the primary database is performed in a later step (step 220) while both devices are off-line. In addition, there is no indication in Klein that

changes made to the secondary database, as a result of synchronization with the primary database, are saved to persistent memory only after a successful evaluation period has elapsed.

Accordingly, claim 2 not only incorporate the patentable features of claim 1, but it also includes additional features not taught by Klein.

Claims 3, and 4-18 depend either directly or indirectly on claim 1, and hence are also patentable.

### **Rejections Under 35 U.S.C. 103**

The Office Action rejects claims 5 and 19 as being obvious over Klein in view of U.S. Patent No. 6,081,811 of Nilsson.

Claim 5 depends on claim 4, which in turn depends on claim 1. Claim 4 further recites that upgrading the second configuration database comprises receiving a configuration control file from a network management server, and executing the configuration control file. Claim 5 adds that upgrading the second configuration database includes receiving a data definition language (DDL) file that contains structured query language (SQL) commands, and that the step of executing the configuration control file includes executing the SQL commands to construct an upgraded database schema in the second configuration database.

As discussed in detail above, Klein fails to teach salient features of amended claim 1 and consequently those of claim 5. Nilsson does not cure the shortcomings of Klein. Nilsson is generally directed to a method of effecting conversion of a single database by creating specifications for a new configuration, converting the database in accordance with these specifications, and verifying that the new database is consistent. It is not, however, concerned with upgrading two databases, much less with upgrading two configuration databases that function as primary and second databases in a network device while ensuring that at least one of the databases continues to provide configuration data to applications executing on the device through the upgrading process.

Hence, claim 5 distinguishes patentably over the combined teachings of Klein and Nilssen.

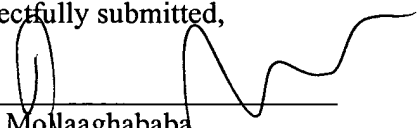
The arguments presented above apply with equal force to establish that amended claim 19 is also patentable.

**Conclusion**

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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